It is Time to Give Social Research a Voice to Tackle AMR

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Sir,

We have noted the recent review by Zellweger *et al.* with great interest.[1] The authors highlight trends and challenges in antimicrobial resistance (AMR) in Southeast Asia and – encouragingly for us as social researchers – point out the need for social science research in a field that is dominated by the medical and biological sciences. We, too, call for more social research to understand and address antimicrobial use and resistance, but this will require a stronger voice for social scientists.

Considering that antimicrobial use and resistance "have a large behavioural component,"[1] the near-absence of social sciences research in AMR prevents comprehensive understanding and effective policy responses. Take for instance something as seemingly simple as the language to communicate the problem of antimicrobial resistance to the general population. Mendelson *et al.* alluded in a recent comment to the lacking popular awareness of "antimicrobial resistance" and the problematic translation of the term into other languages.[2] In our own social research in rural northern Thailand (Chiang Rai; a mostly rural district with 1.3 million inhabitants),[3] we have also come across varied expressions of "antibiotics." For example, rather than "wonder drugs," antibiotics are often referred to as "anti-inflammatory medicine" ("ยาแก้อักเสบ" or "yah kae ak seb"), which links to local descriptions of illnesses as being caused by "inflammations" of the body (e.g. in the case of a sore throat). Moreover, some local ethnic groups in Chiang Rai (e.g. Akha) may not have an equivalent of the Thai term in their mother tongue and rather refer to antibiotics as the "medicine that relieves the pain," and yet other people would not actively distinguish between antibiotics and other kinds of medicine.[i] The literal

[i] These are not the only examples, and our informants also had a wide range of notions and descriptions for other medicines ranging from brand names (e.g. Tiffy) via generic descriptions (fever reliever) to descriptions of appearance ("the white pill").

translation of "antibiotic" ("ยาปฏิชีวนะ" or "yah pa ti chee wa na") is a technical term with Pali roots (akin to Latin) that is hardly used or understood in rural Chiang Rai. Even seemingly unambiguous expressions like "drug resistance" ("ดื้อยา" or "due yah")—literally translated into being "stubborn to [the effects of] medicine"—are being interpreted by non-native speakers or people without active conceptions of antibiotic resistance as meaning "stubborn to take medicine." Language is therefore not merely a means to overcome "irrational behaviour" but it also reflects more fundamentally how people think about medicine and illness. We first need to understand and address such deeper-rooted local conceptions and behaviours involving antimicrobial use. AMR information campaigns referring for example to "antibiotics," "bacteria," or "viruses" could otherwise be fruitless or have unforeseen behavioural repercussions.[4]

In addition, the common policy emphasis on education and "awareness raising" to address behavioural aspects of AMR[5-8] assumes that "irrational" choices are the main driver behind problematic antimicrobial-related behaviour (e.g. over- or under-use of antibiotics), but not all medicine consumption is the result of active choice. Social, economic, and health system constraints may drive people into behaviours where they may be more likely to access antimicrobials—knowingly or unknowingly. Not only do we need qualitative as well as quantitative social research to understand the nature and extent of such structural constraints of antimicrobial use (note that the social sciences are neither a homogeneous field nor synonymous to qualitative research).[ii] In terms of AMR policy, these broader determinants of behaviour also require us to think beyond medical and health policy solutions.

[ii] The various social science disciplines could make different contributions to the field of AMR. For example, social anthropologists and historians might situate current antibiotic usage patterns in a broader social and historical context in order to understand their meaning and origin, microeconomists might consider the role of individual incentives in healthcare choices, or development studies researchers might examine the distribution of power from the micro to the macro level to understand pitfalls, failures, and inequities associated with AMR-related interventions.

Might for instance sick leave, social protection policies, access to financial services like loans and savings accounts, or more efficient public transport alleviate some of the constraints that shape the antimicrobial use among groups who lack access to medical supervision?

Social scientists do not hold a monopoly on social research questions, and the appreciation of social phenomena by medical AMR researchers is laudable indeed. Yet, the continuing absence of social research is a threat to understanding and addressing the social dimensions of AMR more comprehensively and effectively.

Transparency declarations

None to declare.

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